Project Baseline Summary Report

Data Source: **EM CDB** Report Number: **GEN-01b**

Operations/Field Office: **DOE National Program** Print Date: **3/9/2000**

Site Summary Level: **DOE National Program** HQ ID: **0558**

Project **HQ-PC-001 / PACKAGING CERTIFICATION**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

The Department is not subject to the regulatory requirements of the U.S. Department of Transportation (DOT) and the U.S. Nuclear Regulatory Commissiion (NRC). To ensure that the Department has available and uses packagings for transporting radioactive and other hazardous materials, substances, and wastes, the Departments conducts an approval program that is the exact analog to the NRC program that approves such packagings for the public sector. The program consists of three primary projects: 1) RAMPAC Analysis, 2) Confirmatory Testing, and 3) Analytical Tools.

RAMPAC Analysis consists of reviews of the safety analysis reports for packagings (SARPs) that describe packagings that will be used to transport significant quantities of hazardous materials, including spent fuel, high-level wastes, and mixed waste. During this review the Department approving official, called the Headquarters Certifying Official, examines the SARP for conformance with requirements equivalent to those of the NRC and performs confirmatory reviews of the performance tests and analytical reviews of the process that the applicant used to support approval. Upon determination of the acceptibility of the SARP, the Certifying Official issues a formal document confirming that the proposed packaging will conform to the appropriate requirements. Subsequent to the approval an audit of the associated Quality Assurance program will be conducted.

Type A Testing reviews packagings that transport lesser quantities of hazardous materials. These packagings will conform to the DOT requirements for performance-oriented packaging. The testing program consists of both safety analysis reviews and actual testing of the proposed packaging. The acceptibility of the packaging is documented in a book that identities all of the small packagings that have been approved by the Certifying Official.

Analytical Tools provide the computer codes that are used for confirming that hazardous materials packagings meet the appropriate requirements. These codes can simulate accident conditions in transport to which packagings may be subjected. These tools are maintained to state-of-the-art condition and provide the DOE community with tools that are often used by the DOT and NRC.

In summary, packaging certification ensures that packagings used by the Department for transportation are appropriate for the project, meet or exceed a minimum level of performance, and ensure worker safety, public health, and environmental protection.

The Scope of the program includes the following:

a. Review safety analysis reports for packagings.
b. Perform confirmatory analysis for or testing on packagings described in the submitted reports.
c. Perform specific technical reviews and analysis of packaging and transportation safety concerns at the request of the Certifying Official.
d. Maintain and upgrade the computer codes within (SCALES).

The technical approach used to accomplish program goals includes the following:

RAMPAC Analysis: Safety Analysis Reports for packagings will be reviewed for conformance with the requirements of the Department of Transportation and the Nuclear Regulatory Commission in accordance with the procedures described in "Packaging Review Guide for Reviewing

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Project Description Narratives

Safety Analysis Reports for Packagings.

Type A Testing: Testing will be performed on packagings to determine conformance with the requirements of the Department of Transportation and the Nuclear Regulatory Commission in accordance with procedures acceptable to the DOT.

Analytical Tools: SCALES will be evaluated for consistancy with state-of-the-art technology related to thermal, mechanical, and criticality engineering.

Project Status in FY 2006:

The program will continue to be conducted. However, it is anticipated that certification activities related to closure will be completed in FY 2006.

Post-2006 Project Scope:

It is anticipated that closure will reduce the need for an extensive program of package certfication. However, recertification of existing packages, which does not require an extensive review, will result in lower program budget needs. The scope of work will remain the same.

Project End State

As long as there are hazardous materials to be transported there is a need for the package certification program. As the site cleanup work declines the number of packages needing certification will decline. However, the scope of this work includes package certification for programs outside of EM.

Cost Baseline Comments:

All costs are in current year dollars (escalated at a rate of 2.1% per year). 85% of the initial coat is allocated to non-EM activities. This portion of the cost is escalated at a rate of 2.1% per year. The EM portion of the cost will decrease over the life-cycle of the EM program at a rate approximating the decline of environmental management costs over time. The program funding will remain at its current level (adjusted for inflation) until 2006 and will be reduced by 33% until 2011 at which time it will be reduced by 50% until 2021. From 2021 until 2026 the costs will be further reduced by 66% at which time it will be reduced by 80% until 2041. From 2041 until 2046 the program costs will be reduced by 95% and will continue at that level until 2070. A spreadsheet used to calculate these costs is on file.

Safety & Health Hazards:

N/A

Safety & Health Work Performance:

N/A

PBS Comments:

The transportation of hazardous materials is a highly visible activity with the Department. Packaging Certification is an internal regulatory function. Consequently, the Department must conduct a program that is an analog to that of the Department of Transportation and the Nuclear Regulatory Commission.

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Project Description Narratives

Baseline Validation Narrative:

N/A

General PBS Information

Project Validated? **Date Validated:**

Has Headquarters reviewed and approved project? No

Date Project was Added: 12/1/1997

Baseline Submission Date:

FEDPLAN Project? Yes

Drivers:	**CERCLA**	**RCRA**	**DNFSB**	**AEA**	**UMTRCA**	**State**	**DOE Orders**	**Other**
	N	N	N	Y	N	N	Y	Y

Project Identification Information

DOE Project Manager: Michael Wangler

DOE Project Manager Phone Number: 301-903-5078

DOE Project Manager Fax Number: 301-903-9691

DOE Project Manager e-mail address: mike.wangler@em.doe.gov

Is this a High Visibility Project (Y/N):

Planning Section

Baseline Costs (in thousands of dollars)

	1997-2006 Total	**2007-2070 Total**	**1997-2070 Total**	**1997**	**Actual 1997**	**1998**	**Actual 1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
PBS Baseline (current year dollars)	35,414	486,781	522,195			4,648	4,648	3,756	3,716	3,716	3,794	3,874	3,955	4,038	3,917

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Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006
PBS Baseline (constant 1999 dollars)	33,109	200,297	233,406			4,648	4,648	3,756	3,618	3,544	3,544	3,544	3,544	3,544	3,367
PBS EM Baseline (current year dollars)	35,414	486,781	522,195			4,648	4,648	3,756	3,716	3,716	3,794	3,874	3,955	4,038	3,917
PBS EM Baseline (constant 1999 dollars)	33,109	200,297	233,406			4,648	4,648	3,756	3,618	3,544	3,544	3,544	3,544	3,544	3,367

	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
PBS Baseline (current year dollars)	3,999	4,083	4,169	4,256	22,064	24,480	26,427	28,669	31,808	35,291	38,155	42,333	46,968	52,112	57,818	64,149
PBS Baseline (constant 1999 dollars)	3,367	3,367	3,367	3,366	16,405	16,404	15,961	15,606	15,606	15,606	15,207	15,207	15,207	15,207	15,207	15,207
PBS EM Baseline (current year dollars)	3,999	4,083	4,169	4,256	22,064	24,480	26,427	28,669	31,808	35,291	38,155	42,333	46,968	52,112	57,818	64,149
PBS EM Baseline (constant 1999 dollars)	3,367	3,367	3,367	3,366	16,405	16,404	15,961	15,606	15,606	15,606	15,207	15,207	15,207	15,207	15,207	15,207

Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	0.00%	0.00%	2.70%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070

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2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

Project Reconciliation

Project Completion Date Changes:

Previously Projected End Date of Project:

Current Projected End Date of Project: 9/30/2070

Explanation of Project Completion Date Difference (if applicable):

No difference, in 2070 mission will be transfered to another DOE entity.

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):		**Actual 1997 Cost:**	**Actual 1998 Cost:**	4,648
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	-4,648	**Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):**		-125
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	-4,773			

Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		
Cost Reductions Due to Efficiencies (-):		
Cost Associated with New Scope (+):		
Cost Growth Associated with Scope Previously Reported (+):		
Cost Reductions Due to Science & Technology Efficiencies (-):		
Subtotal:	-4,773	
Additional Amount to Reconcile (+):	233,531	Life-cycle cost not calculated last year. Life-cycle cost now projected to 2070.
Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	**228,758**	

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Project **HQ-PC-001 / PACKAGING CERTIFICATION**

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Project start			10/1/1986								
Mission completion			9/30/2070								
Project end			9/30/2070								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critial Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Project start				Y							Begin the review of packages used to transport hazardous and radioactive materials, including hazardous materials, spent fuel high-level wastes, and other wastes.
Mission completion						Y					EM ends mission will be transfered to other DOE entity.
Project end					Y						